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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANJA KLEIN, MICHAEL FARBER,
and CHRISTIAN LUDERS

Appeal 2010-002916
Application 09/530,386
Technology Center 2600

Before ERIC B. CHEN, BRUCE R. WINSOR,
and JULIE K. BROCKETTI, Administrative Patent Judges.

WINSOR, Administrative Patent Judge.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 18-21 and 24-35, which constitute all the claims pending in this application (Br. 5). We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part and institute a new ground of rejection within the provisions of 37 C.F.R. § 41.50(b).

STATEMENT OF THE CASE

Appellants' invention relates to setup of a connection of a mobile station to a base station in a radio communication system. (Spec. 1:4-6).

Claim 18, which is illustrative of the invention, reads as follows:

18. A method for connection setup for mobile stations of a radio communication system having at least one base station, comprising:

recurrently offering frequency channels for a random access in an upstream direction for the mobile stations;

in the mobile station that requests a connection setup, measuring a reception power of a signal sent from the base station in a downstream direction; and

in the mobile station, setting a transmission power dependent on the measured reception power for sending an access radio block to the base station,

wherein codes are used to separate information of different connections between the base station and mobile stations,

wherein if the access radio block, sent to the base station, has not been successfully detected by the base station, a new access radio block is sent by the mobile station with increased power, and

wherein the signal transmitted in the downstream direction is a pilot signal.

The Examiner relies on the following prior art in rejecting the claims:

Oberholtzer	US 5,465,399	Nov. 7, 1995
Gilhousen	US 5,485,486	Jan. 16, 1996
Gardner	US 5,729,557	Mar. 17, 1998
Jolma	US 5,806,003	Sept. 8, 1998
Hayashi	US 6,069,884	May 30, 2000
Bender	US 6,366,779 B1	Apr. 2, 2002

Claims 18-20, 24-29, and 31-35 stand rejected under 35 U.S.C.

§ 103(a) as being obvious over Jolma, Gardner, Hayashi, and Oberholtzer.

Claim 21 stands rejected under 35 U.S.C. § 103(a) as being obvious over Jolma, Gardner, Hayashi, Oberholtzer, and Gilhousen.

Claim 30 stands rejected under 35 U.S.C. § 103(a) as being obvious over Jolma, Gardner, Hayashi, Oberholtzer, and Bender.

Rather than repeat the arguments here, we make reference to the Appeal Brief (Br., filed June 25, 2009) and the Answer (Ans., mailed Sept. 7, 2007) for the respective positions of Appellants and the Examiner.¹

ISSUES

The issues presented by the appeal are:

1. Has the Examiner articulated a sufficient rationale to establish a prima facie case of obviousness?
2. Did the Examiner err in rejecting claims 18-20, 24-29, and 31-35 as being obvious over the combination of Jolma, Gardner, Hayashi, and Oberholtzer?

¹ The Appeal Briefs filed July 30, 2004, Feb. 22, 2005, Aug. 7, 2006, and April 24, 2009, the Examiner's Answers mailed Oct. 20, 2006, and July 20, 2007, and the Reply Brief filed Dec. 20, 2006, have been made of record but have not been considered. Those briefs and answers are deemed to have been replaced and superseded by Appellants' Appeal Brief filed June 25, 2009 (see Br. 1) and the Examiner's Answer mailed Sept. 7, 2007.

3. Did the Examiner err in rejecting claim 21 as being obvious over the combination of Jolma, Gardner, Hayashi, Oberholtzer, and Gilhousen?

4. Did the Examiner err in rejecting claim 30 as being obvious over the combination of Jolma, Gardner, Hayashi, Oberholtzer, and Bender?

FINDINGS OF FACT

The following enumerated Findings of Fact (FF) are supported by a preponderance of the evidence.

Hayashi

1. Hayashi discloses a communication system (Fig. 1; col. 9, ll. 31-32) having a base station and at least a mobile unit communication apparatus (col. 1, ll. 39-43).

2. Hayashi discloses that communication between the base station and the at least a mobile unit communication apparatus is through Code Division Multiple Access (CDMA) (col. 1, ll. 16-18, 44-47).

3. Hayashi discloses transmitting a pilot signal from the base station to the at least a mobile communication apparatus (col. 1, l. 44 - col. 2, l. 8).

4. Hayashi discloses transmitting data between a mobile unit and a base station in downward time slots (col. 3, l. 39) and upward time slots (col. 3, l. 58) by time division multiplexing (col. 3, l. 56).

Jolma

5. Jolma discloses that the call setup procedure is similar, whether initiated by the base station or the mobile station (col. 4, ll. 23-24).

6. Jolma discloses a Time Division Multiple Access (TDMA) (col. 3, ll. 49-52) GSM cellular network system in which at least one base station in a cell communicates with mobile stations in the cell (col. 3, ll. 7-10).

7. Jolma discloses a method of establishing connections between mobile stations and a base station in which great differences in the levels of received channel requests are avoided, eliminating interference caused by them in the operation of the base station receiver (col. 2, ll. 13-16).

8. Jolma discloses that common control channels are used to establish a connection between the base station and a mobile station (col. 3, ll. 44-47) which include a Broadcast Control Channel (BCCH) (col. 3, ll. 58-65).

9. Jolma discloses that the mobile stations listen to the BCCH and measure the power level of the received signal (col. 3, l. 66 - col. 4, l. 2).

10. Jolma discloses that the mobile station adjusts transmission power on the basis of data transmitted from the base station on a control channel and computes, on the basis of the measured power of the signal received from the base station on the control channel, a transmission power needed when a channel request is sent to the base station (col. 2, ll. 30-39; see also col. 3, l. 66-col. 4, l. 22).

11. Jolma discloses that a channel request is sent as a data frame (Fig. 2; col. 2, l. 62-63; col. 3, ll. 54-57).

12. Jolma discloses that the data transmitted on the BCCH comprises data indicating at which power it has been transmitted from the base station (col. 4, ll. 2-4) which enables the mobile station to compute the current attenuation of the signal and to estimate the transmission power at

which a channel request should be transmitted to the base station (col. 4, ll. 1-8).

13. Jolma discloses that to compute the power level P_{MS} needed to transmit a Channel Request the mobile station computes the attenuation L on the radio path by subtracting the received power P_{BCCH} from the power level P_{BTS} used by the base station. P_{MS} is obtained by adding L to a desired power level P_{RQ} received from the base station. (col. 4, ll. 16-42).

Gardner

14. Gardner discloses that communication between a mobile unit and a base unit is by one or more blocks (col. 4, ll. 51-60).

15. Gardner discloses that a mobile unit nominal transmit power P_{MT} is calculated based on an estimate of the received signal power P_{MR} (col. 6, ll. 1-11).

16. Gardner discloses that if the nominal transmit power P_{MT} is not less than the maximum transmit power P_{MAX} of the mobile unit, then a bias factor is be added to the maximum power of the mobile unit and the blocks are transmitted at a reduced code rate (col. 6, ll. 52-65).

17. Gardner discloses that each base station broadcasts a power product PP which is equal to $P_{BT} * P_{BR}$ (col. 3, ll. 55-57), i.e., the product of base station transmit power P_{BT} (col 3, ll. 40-41) and the power level received at the base station P_{BR} (col 3., ll. 41-42), which is used by the mobile unit to determine its transmit power (col. 3, ll. 50-64).

Oberholtzer

18. Oberholtzer discloses controlling the power of radio signals transmitted by each member station of a network to ensure reliable communication between the member stations (col. 1, ll. 11-16).

19. Oberholtzer discloses that a transmit power level output from a transmitter 26 that is used to initially establish communication with other stations is a default transmit power level P_{default} (col. 7, ll. 15-18; Fig. 2A).

20. Oberholtzer discloses that if no stations respond to the transmissions at this transmit power level, then the transmit power level of the station forming the network is incrementally increased in steps $P_{D'}$ until receiver 28 receives a signal from another station indicating that a communication link has been established or until a maximum power $P_{\text{max'}}$ is reached and no station replied, whichever occurs first (col. 7, ll. 18-33; Fig. 2A).

Gilhousen

21. Gilhousen discloses that when the signal received by a mobile unit from a cell site transmitter is weaker, the mobile unit responds with a higher transmit power (col. 6, ll. 43-65; see also Fig. 2A, 2B).

Bender

22. Bender discloses that a mobile station uses a selected power control sub-channel when it begins transmitting data on the reverse communication link (col. 4, l. 56-col. 5, l. 8).

PRINCIPLES OF LAW

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 416 (2007).

“If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it

would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”

Id. at 417. “[T]he [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” Id. at 418. “The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.” Id. at 419. “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” Id. at 420. “A person of ordinary skill is also a person of ordinary creativity, not an automaton.” Id. at 421. “Rigid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it.” Id.

[A]ll that is required of the [USPTO] to meet its prima facie burden of production is to set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. As the statute itself instructs, the examiner must “notify the applicant,” “stating the reasons for such rejection,” “together with such information and references as may be useful in judging the propriety of continuing prosecution of his application.” 35 U.S.C. § 132.

In re Jung, 637 F.3d 1356, 1363 (Fed. Cir. 2011)

To justify combining reference teachings in support of a rejection it is not necessary that a device shown in one reference can be physically inserted into the device shown in the other. The test for obviousness is not whether the features

of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

In re Keller, 642 F.2d 413, 425 (CCPA 1981) (citations omitted).

Where a rejection is based on a combination of references, the order in which prior art references are cited to the Applicant is of no significance, but is merely a matter of exposition. In re Bush, 296 F.2d 491, 496 (CCPA 1961).

ANALYSIS

PRIMA FACIE CASE

Appellants contend that the Examiner has failed to establish a prima facie case of obviousness (see Br. 21-41) because the Examiner has provided inadequate motivational links for the combination of the secondary references with the underlying primary reference or modified primary reference (see Br. 23, 25-27, 32, 33, 35, 37, 40). Appellants further contend that when relying on the disclosure of a feature found in the prior art previously cited in the rejection, the Examiner improperly relied on the rationale previously stated for the combination (see Br. 24, 32, 34, 37). We disagree.

Appellants' contentions regarding the particular "motivational link" cited by the Examiner are unpersuasive, see KSR, 50 U.S. 398, 419, as any problem addressed by the references may serve as a reason to combine them, id., 420, and we find the reasons articulated by the Examiner to be reasonable. Appellants' reliance on the distinction between a "primary,"

“modified primary,” or “underlying” reference and a “secondary” reference is misplaced; it is what the combined teaching of the references would suggest to one skilled in the art that is significant, see *Keller*, 642 F.2d 413, 425, not the order in which the combination is described, see *Bush*, 296 F.2d 491, 496.

We find that, considering the Examiner’s grounds for rejection as a whole, (Ans. 4-8) the Examiner has set forth the statutory basis for the rejections, the references relied on, and a rationale for the combination of references, in a sufficiently articulate and informative manner to meet the notice requirement of 35 U.S.C. § 132 and establish a *prima facie* case. See *Jung*, 637 F.3d 1356, 1363; see also *KSR*, 550 U.S. 398, 420. We further find that the Examiner’s articulated rationale for the combination of references given for the rejection of independent claim 18 (Ans. 5-6) provides the required notice as to the rejections of claims dependent from claim 18 that are based on the same combination of references.

CLAIMS 18-20, 24-29, AND 31-35

Claim 18 and 32-35

Appellants’ contentions (Br. 21-30) regarding the patentability of claim 18 can be summarized as follows: The Examiner has failed to establish a *prima facie* case of obviousness and one skilled in the art would not have made the combination of *Jolma*, *Hayashi*, *Gardner*, and *Oberholtzer* set forth by the Examiner (Br. 30).

Appellants contend that the Examiner has not presented an adequate rationale for the combination of the references (see, e.g., Br. 25-26) and has “failed to relate the recited motivations to the underlying primary or

modified primary reference,” (Br. 26). This contention is discussed under the heading “Prima Facie Case” *supra*.

Appellants also contend that various technological differences between Hayashi and Jolma would deter the combination of their teachings (see Br. 21-24). We disagree, because “[t]o justify combining reference teachings in support of a rejection it is not necessary that a device shown in one reference can be physically inserted into the device shown in the other,” Keller, 642 F.2d 413, 425. We note, in particular, that Appellants’ contention that Jolma and Hayashi are concerned with opposite directions of communication (Br. 23) is contradicted by Jolma, which teaches that call setup in both directions of communication is similar (FF 5).

The Examiner correctly found (Ans. 5) that Hayashi discloses a CDMA (FF 2) mobile telephone system having a base station and mobile stations (FF 1) that transmits a pilot signal downstream from the base stations to the mobile station (FF 3). The Examiner further found (Ans. 6) that that Gardner discloses the transmission of signals between the base station and the mobile station, and the reverse, in blocks (FF 14), i.e., groups of bits transmitted as a unit. To the extent the Hayashi does not implicitly disclose transmission of signals in blocks (see, e.g., Hayashi, Fig. 5 A-5C), it would have been obvious to the skilled person to incorporate Gardner’s transmission of signals in blocks between the base station and mobile stations, and the reverse, into Hayashi’s CDMA mobile telephone system, because it is a combination of familiar elements according to known methods that does no more than yield predictable results, see KSR, 550 U.S. 398, 416, and is a predictable variation that can be implemented by a person of ordinary skill in the art, *id.* at 417.

Jolma discloses a TDMA mobile telephone system having a base station and mobile stations (FF 6). As the Examiner found (Ans. 4), Jolma discloses a method for connection setup in which Jolma's base station recurrently offers frequency channels for a random access in an upstream direction for the mobile stations (FF 8). As also found by the Examiner, Jolma's mobile station requesting a connection setup measures the reception power of a signal sent from the base station in a downstream direction (FF 9) and sets the mobile station's transmission power for an access signal request dependent on the measured power of the base station (FF 10, 11). Jolma's method for connection setup improved Jolma's TDMA system by eliminating interference between channel requests (FF 7). One of ordinary skill in the art would have found it obvious to incorporate the connection setup method taught by Jolma with Hayashi's CDMA system, as modified by Gardner, because the connection method would predictably improve Hayashi's CDMA system in the same way that it improves Jolma's TDMA system, and such incorporation would not be beyond the ordinary level of skill. See KSR, 50 U.S. 398, 417.

Oberholtzer discloses a radio network system having a plurality of stations (FF 18). The Examiner correctly found that Oberholtzer teaches that if an initial signal sent at an initial power level by a station to establish communication with another station (FF 19) fails to establish communication, a new signal is sent at an increased power level to establish communication (FF 20). Oberholtzer's method of increasing power ensures reliable communication between members of Oberholtzer's network (FF 18). One of ordinary skill in the art would recognize that Oberholtzer's technique of increasing transmission power would predictably improve connection

setup in Hayashi's CDMA system, as modified by Gardner and Jolma, in the same way that it improves communication in Oberholtzer's network, and such incorporation would not be beyond the ordinary level of skill. See KSR, 50 U.S. 398, 417.

Appellants contend:

By combining Jolma et al. and Oberholtzer et al., the Examiner is adding the Oberholtzer et al. security mechanism to a system (Jolma et al.) which already has a working security mechanism.

In this case, one skilled in the art would not have added the additional security mechanism to Jolma et al. i.e., Jolma et al. does not need the cited feature of Oberholtzer et al.

Further, it is respectfully submitted that one skilled in the art, looking at Jolma et al. with the aim of modifying Jolma et al. to make sure a signal from the mobile station will be received at the base station. would actually proceed as follows: instead of calculating the transmit power by simply adding together the attenuation and the desired power level, one skilled in the art would add up the attenuation and the desired power level and some secondary margin.

(Br. 29-30).

The use of multiple features for assuring system and method success is well known in many fields of technological endeavor, and the skilled person would not be dissuaded from adding a further security mechanism by the mere presence of another security mechanism. By way of example only, Gardner discloses a method of setting a mobile unit transmit power based on an estimate of the received signal power (FF 15), and, as a secondary security mechanism, transmitting the blocks at a reduced data rate if the needed transmit power exceeds the capability of the mobile unit (FF 16). As to Appellants' hypothetical modification of Jolma (Br. 29-30), we find that

the “secondary margin” described by Appellants differs from Oberholtzer’s incremental power step (FF 20) only insofar as Oberholtzer discloses adding the incremental step in response to a failure to establish a connection setup.

Accordingly, we conclude that the Examiner’s combination of Jolma, Hayashi, Gardner, and Oberholtzer establishes a prima facie case of obviousness that Appellants have not rebutted. We will sustain the rejection of claim 18. The patentability of independent claims 33-35 (Br. 30-31) and dependent claim 32 (Br. 33) were argued relying on the arguments presented for claim 18. We will, therefore, sustain the rejections of claims 32-35.

Claims 19 and 20

The Examiner has found (Ans.6) that the system disclosed by Hayashi:

is configured as a TDMA/CDMA radio communication system, plurality of connections between the mobile frequency channels information of different connections can be distinguished from one another according to a connection-individual code, whereby information is simultaneously transmitted between stations and the base station in time slots based on the information of the codes used to separate information of different connections,

(Br. 42) as recited in claim 19. We agree (see, FF 2, 4).

Appellants do not dispute the Examiner’s characterization of Hayashi’s disclosure (Br. 32) but argue that the Examiner has incorporated the cited features into Jolma without proper regard to a motivational link between Hayashi and Jolma as secondary and primary references, respectively (*id.*). This contention is discussed under the heading “Prima Facie Case” *supra*.

Similar to the discussion *supra* regarding claim 18, a skilled person would recognize that Jolma’s method for connection setup and Oberholtzer’s

method of increasing power would each predictably improve Hayashi's TDMA/CDMA system, as modified in view of Gardner, in the same way that they improve the systems and methods disclosed by Jolma and Oberholtzer, respectively, and such incorporation would not be beyond the ordinary level of skill. See KSR, 50 U.S. 398, 417.

Accordingly, we conclude the Appellants have not demonstrated any error and will sustain the rejection of claim 19, and of claim 20, which was argued relying on the arguments presented for claims 18 and 19.

Claims 24 and 25

Appellants contend that Hayashi does not disclose a method in which a base station transmits both a pilot signal and another signal that is a training sequence signal as recited in claim 24. We construe the ordinary meaning of "another signal" in claim 24 as meaning a signal that is separate and distinct from, and being transmitted in parallel with, the pilot signal recited in claim 18. In other words, claim 24 recites a method in which both a pilot signal and training sequence signal are provided, and the signals are separate and distinct. We agree that this is not disclosed by Hayashi and will not sustain the rejection of claim 24.

Appellants do not present any argument particular to the recitations of claim 25. Accordingly, we will sustain the rejection of claim 25. See 37 C.F.R. 41.37(c)(1)(vii).

Claims 26 and 27

The Examiner has taken official notice that the concepts of partial and complete compensation are well known in the art, so that "[i]t would have been obvious [that] the attenuation of the received signal is estimated, and on the basis of this, the mobile station is able to set the transmission power

to partially and/or complet[ly] compensate the path loss during transmission” as recited in claims 26 and 27 respectively (Ans. 7).

Appellants contend that the Examiner’s official notice is unsupported by documentary evidence in the record (Br. 35-36) and based on vague and indefinite reasons for modifying the primary reference (Br. 36). We disagree.

Appellants’ claim 27, which recites complete compensation, is dependent upon claim 26, which recites partial compensation. Claim 27, therefore, incorporates all of the limitations of claim 26 and further limits claim 26, see 35 U.S.C. § 112, fourth paragraph. Accordingly, as claimed by Appellants, complete compensation is encompassed by partial compensation. As conceded by Appellants (Br. 36), Jolma discloses complete compensation (see FF 10), which provides adequate documentary evidence to support the Examiner’s official notice. Further documentary evidence can be found in Gardner, which discloses that when the needed compensation for path attenuation exceeds maximum transmission capability of the mobile unit, the mobile unit partially compensates for path attenuation and reduces the coding rate of the transmission (FF 16). Thus, Gardner further supports the Examiner’s official notice that partial and complete compensation are well known.

Appellants state that “it would appear contrary to purposely have less than full compensation when full compensation is available” (Br. 36), however claims 26 and 27 do not require that partial compensation occur when full compensation is available. Appellants are, therefore, arguing a limitation not found in the claim.

As found by the Examiner, the incorporation of partial and complete compensation for radio field attenuation into the combination discussed supra regarding claim 18 would have been obvious, as it is a combination of familiar elements according to known methods that does no more than yield predictable results, see KSR, 550 U.S. 398, 416, and is a predictable variation, that can be implemented by a person of ordinary skill in the art, *id.* at 417. We will, therefore, sustain the rejection of claims 26 and 27.

Claims 28 and 29

The Examiner states “the modified Jolman [sic] et al. disclose at least one auxiliary information is inserted into the signal sent in the downstream direction, this being employed by the mobile station for setting the transmission power” (Ans. 6), and points to Gardner for the disclosure of these features. Appellants do not dispute the Examiner’s findings as to Jolma’s and Gardner’s disclosures, but assert that the Examiner has failed to provide any further obviousness rationale for the added features. This contention is discussed under the heading “Prima Facie Case” supra.

Accordingly, to the extent that the recitations of claims 28 and 29 may not be not fully disclosed by Jolma (see FF 10, 12), we find that it would have been obvious to incorporate Gardner’s disclosure (FF 17) of auxiliary information being inserted into the signal sent in the downstream direction, the inserted information being employed by the mobile station for setting the transmission power, and the auxiliary information being composed of information about the transmission power used by the base station in the downstream direction, into the combination discussed supra regarding claim 18. Such combination is a combination of familiar elements according to known methods that does no more than yield predictable results, see KSR,

550 U.S. 398, 416, and is a predictable variation, that can be implemented by a person of ordinary skill in the art, *id.* at 417. We will, therefore, sustain the rejection of claims 26 and 27.

Claim 31

The Examiner has found that the failure of Jolma to disclose a spread access radio block “inherently” discloses that the access radio block is not spread (Ans. 6). Appellants contend:

This is an improper use of inherency in rejecting claim 31. If Jolma et al. fails to indicate whether an access radio block is spread, then Jolma et al. cannot be relied upon to disclose either the spreading of that access radio block or the access radio block not being spread. An additional teaching must be used to explain either that Jolma et al. actually does or does not spread the access radio block.

(Br. 38). Jolma was cited by the Examiner as rendering claim 31 obvious when combined with Hayashi, Gardner and Oberholtzer. Although the Examiner has used the term “inherently,” inherency is a doctrine applied in an anticipation context, not an obviousness context, as here. Consistently with an obviousness rejection, the Examiner has used “inherently” in a more ordinary sense. An obviousness analysis is not confined to the explicit disclosure of the references and can consider the inferences a skilled person would make, see KSR, 550 U.S. 398, 418-19; the test is what the combined teaching of the references would suggest to one of ordinary skill in the art, see Keller, 642 F.2d 413, 425 .

Appellants have not disputed that Hayashi, when read together with Gardner teaches or suggests spread access blocks (Br. 33). Reading the Examiner’s finding in the context of the overall grounds for rejection, we understand the Examiner’s position to be that one of ordinary skill in the art,

reading Jolma together with Hayashi and Gardner, would understand that the access signal blocks could be spread, as taught by Hayashi, or not spread, as the Examiner has found a skilled person would infer from (i.e., is “inherently” disclosed by) the absence of spreading the access block in Jolma’s disclosure. We find this to be a reasonable inference. Therefore, we will sustain the rejection of claim 31.

CLAIM 21

The Examiner finds that Gilhousen discloses that “the mobile station sets the transmission power all the higher the lower the measured reception power is,” as recited in claim 21 (Ans. 7-8). Appellants do not dispute the Examiner’s characterization of Gilhousen’s disclosure, but instead contend the “relied upon reason for modifying the Jolma et al. system would not appear to be definite or distinct, and [it]is unclear how or why it would [be] related to the Jolma et al. system” (Br. 39). This contention is discussed under the heading “Prima Facie Case” supra.

Accordingly, to the extent that the recitations of claim 21 may not be fully disclosed by Jolma (see FF 13), we find that it would have been obvious to incorporate Gardner’s disclosure (FF 21) of the mobile station setting its transmission power all the higher the lower the measured reception power is, into the combination discussed supra regarding claim 18. Such combination is a combination of familiar elements according to known methods that does no more than yield predictable results, see KSR, 550 U.S. 398, 416, and is a predictable variation that can be implemented by a person of ordinary skill in the art, *id.* at 417. Therefore, we will sustain the rejection of claim 21.

CLAIM 30

The Examiner finds (Ans. 8) that Bender discloses a broadband frequency range [that] is divided into sub-ranges having a narrower bandwidth within a frequency channel for the random access, the mobile station that requests the connection setup selecting a sub-range within said frequency channel, and the mobile station sending the access radio block to the base station in this sub-range (Br. 44), as recited in claim 30. Appellants do not dispute the Examiner's characterization of Bender's disclosure, but instead contend the Examiner's "reasoning for modifying Jolma et al. would appear to be vague and unclear, and further unrelated to the underlying systems or suggested in a cavalier manner without consideration of the underlying systems," (Br. 40). This contention is discussed under the heading "Prima Facie Case" supra.

We find that it would have been obvious to incorporate of the use of sub ranges within a frequency channel (FF 22) into a method as claimed in claim 18, see supra. Such combination is a combination of familiar elements according to known methods that does no more than yield predictable results, see KSR, 550 U.S. 398, 416, and is a predictable variation that can be implemented by a person of ordinary skill in the art, id. at 417. We will, therefore, sustain the rejection of claim 30.

NEW GROUND OF REJECTION WITHIN 37 C.F.R. § 41.50(b)

Claim 24 is rejected on a new ground of rejection under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. As discussed supra, we construe claim 24 to recite a method in which both a pilot signal and training sequence signal are provided, and the signals are separate and distinct. Appellants' Specification makes references

to a training sequence (Spec. 4:14, 6:3, 8:1, 8:24, 10:32) and to a pilot signal (Spec. 4:15, 6:5, 11:1). However, Appellants' Specification discloses the training sequence signal and pilot signal as alternatives (Spec. 4:13-16; 6:1-6). We find no disclosure of a system that uses both a pilot signal and a training sequence signal that are separate and distinct signals. Accordingly, claim 24 contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

DECISION

The decision of the Examiner to reject claims 18-21 and 25-35 is affirmed. The decision of the Examiner to reject claim 24 is reversed. We enter a new ground of rejection for claim 24 under 35 U.S.C. § 112, first paragraph.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that “[a] new ground of rejection . . . shall not be considered final for judicial review.”

Section 41.50(b) also provides that Appellants, **WITHIN TWO MONTHS FROM THE DATE OF THE DECISION**, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

Appeal 2010-002916
Application 09/530,386

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record.

37 C.F.R. § 41.50(b).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). See 37 C.F.R. § 1.136(a)(1)(iv) (2010).

AFFIRMED-IN-PART
37 C.F.R. § 41.50(b)

ELD